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10/521,539	01/14/2005	Shusaku Shibasaki	OT-5055	1524

7590
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10 Farm Springs
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01/28/2008

EXAMINER

PICO, ERIC E

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/521,539
Filing Date: January 14, 2005
Appellant(s): SHIBASAKI, SHUSAKU

MAILED

JAN 28 2008

GROUP 3600

Frederic T. Tenney
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06/14/2007 appealing from the Office action mailed 1/18/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

568,345	GILPIN ET AL.	9-1896
380,651	FOWLER ET AL.	4-1888
190,291	DAVIS	5-1877

3,768,596

SOLYMOS

10-1973

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cross-section of the coil element being arcuate claimed in claim 4, a thickness of the innermost coil radially varies claimed in claim 8 and 10, and a thickness of the outermost coil radially varies claimed in claim 9, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. Claims 8-10 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. **Regarding claims 8-10**, it is unclear and indefinite wherein the innermost or the outermost coil can radially vary when independent claim 1 claims a thickness of the coil element is substantially uniform between an outermost coil and an innermost coil.
4. The term "substantially" in claims 8-10 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.
5. Claim(s) 1 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilpin et al. U.S. Patent No. 568345 in view of Fowler et al. U.S. Patent No. 380651.

6. **Regarding claim 1**, Gilpin et al. discloses a buffer for an elevator system, the buffer comprising:

7. a conical coil spring D, D',

8. wherein the buffer is configured to be disposed at one end of a hoistway of the elevator system for contacting a vertically moving member, referred to as elevator-car E, of the elevator system in the event of an abnormal overrun,

9. wherein the conical spring D, D' includes a spiral coil element that comprises a series of coils,

10. wherein a radius of the spring coil element decreases along an axis of the conical coil spring.

11. Gilpin et al. is silent concerning the spiral coil spring being fully compressed, the coils of the spiral coil spring are configured to be arranged in a substantially planar configuration, and wherein a thickness of the coil element is substantially uniform between an outermost coil and an innermost coil.

12. Fowler et al. teaches a spiral coil element comprising:

13. a conical coil spring A,

14. wherein the conical spring A includes a spiral coil element that comprises a series of coils,

15. wherein a radius of the spring coil element decreases along an axis of the conical coil spring such that if the spiral coil spring is fully compressed, the coils of the spiral coil spring are configured to be arranged in a substantially planar configuration, and

16. wherein a thickness of the coil element is substantially uniform between an outermost coil and an innermost coil.

17. It would have been obvious to one of ordinary skill in the art at the time of the invention to configure the spiral coil spring disclosed by Gilpin et al. to be arranged in a substantially planar configuration, and wherein a thickness of the coil element is substantially uniform between an outermost coil and an innermost coil as taught by Fowler et al. to provide a fully compressive spring which will offer an increased traveling distance of the moving member.

18. **Regarding claim 2 and 3**, Gilpin et al. is silent concerning an outer radius of a coil is less than an inner radius of an adjacent coil, thereby permitting the coils to be compressed axially without experiencing radial interference and wherein a cross-section of the coil element is circular.

19. Fowler et al. teaches a an outer radius of a coil is less than an inner radius of an adjacent coil, thereby permitting the coils to be compressed axially without experiencing radial interference shown in Figure 1; and wherein a cross-section of the coil element is circular, shown in Figure 2.

20. It would have been obvious to one of ordinary skill in the art at the time of the invention to make an outer radius of a coil disclosed by Gilpin et al. less than an inner radius of a adjacent coil as taught by Fowler et al. to provide a fully compressive spring which will offer a uniform resistance notwithstanding variations in its length by compression.

21. **Regarding claim 5**, Gilpin et al. discloses a transverse coil pitch of the coil element is constant.

22. **Regarding claim 6**, Gilpin et al. discloses the vertically moving element is an elevator car E.

23. **Regarding claim 8-10**, Gilpin et al. is silent concerning a thickness of the innermost coil or the outermost coil radially varies so as to create a substantially flat contact surface.

24. Fowler et al. teaches a thickness of the innermost coil and the outermost coil radially varies, Lines 38-41, so as to create a substantially flat contact surface.

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to vary the thickness of the innermost coil and the outermost coil disclosed by Gilpin et al. radially as taught by Fowler et al. to offer a uniform resistance notwithstanding variations in its length by compression.

26. Claim(s) 4 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilpin et al. U.S. Patent No. 568345 in view of Fowler et al. U.S. Patent No. 380651 as applied to claim 2 above, and further in view of Davis U.S. Patent No. 190291.

27. **Regarding claim 4**, Gilpin et al. is silent concerning a cross-section of the coil element being arcuate.

28. Davis teaches a cross-section of a coil element being arcuate, shown in Figures 3-7.

29. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the cross-section of the coil element disclosed by Gilpin et al. a

arcuate as taught by Davis to attain the desired spring characteristics for the given application.

30. Claim(s) 7 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilpin et al. U.S. Patent No. 568345 in view of Fowler et al. U.S. Patent No. 380651 as applied to claim 2 above, and further in view of Solymos U.S. Patent No. 3768596.

31. **Regarding claim 7**, Gilpin et al. is silent concerning the vertically moving element is a counterweight.

32. Solymos teaches a vertically moving element being a counterweight 7.

33. It would have been obvious to one of ordinary skill in the art at the time of the invention to dispose a spring buffer disclosed by Gilpin et al. for contacting a vertically moving counterweight as taught by Solymos to reduce the speed of a counterweight in case of abnormal overrun of a counterweight.

(10) Response to Argument

34. Applicant's arguments filed 04/30/2007 have been fully considered but they are not persuasive.

35. In response to applicant's argument, "There is no suggestion found in Gilpin and Fowler to substitute the spring of Fowler for the springs of Gilpin, and then modify the Fowler spring, contrary to the teaching of Fowler, so that the coil segments between the outermost coil and the innermost have a substantially uniform thickness or diameter" the term "substantially" is a relative term which is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The

claims are given the broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997). Fowler et al. teaches, as recited in claims 1 and 8, a thickness of the coil element is substantially uniform between an outermost and an innermost coil, shown in Figures 1 and 2, and wherein a thickness of the innermost coil radially varies so as to create a substantially flat contact surface, shown in Figure 3, although not "completely" or "entirely" uniform but subtly uniform. Therefore, Fowler et al. teaches in the broadest reasonable interpretation a thickness of the coil element being substantially uniform between an outermost and an innermost coil and wherein a thickness of the innermost coil radially varies so as to create a substantially flat contact surface.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

Eric E. Pico

Conferees:

Saul Rodriguez 

Meredith Petravick 


SAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER